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JUNE 2007

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Thermofrost Cryo celebrates

SAVINGS AT TESCO



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Energy savings at Tesco Express

Tesco retrofit to save refrigeration energy

Smartcool Systems, the Hampshire based energy conservation company, has recently completed the installation and commissioning of its Energy Saving Module™ at five hundred Tesco Express locations across the UK.

According to recent DTI figures, energy required for refrigeration accounts for over 35p in every pound spend on electricity by British business. Globally, energy costs have seen huge rises in the last three years as any 'bill payer' will endorse! Price increases have meant that it is not just the large users of refrigeration who are now looking to reduce costs. Anyone with large air conditioning bills or running costs for liquid chillers must now be putting energy consumption under the spotlight.

Energy conservation is at the heart of the Smartcool business, the company points out that 'the cheapest energy is that which you don't use'.

"Often a simple change in behaviour is the most difficult thing for businesses to embrace, when it comes to saving energy," explains Smartcool's Dan Weaver. "Sometimes it's impossible to effectively communicate a new approach when a business may have several locations and dozens of employees. The ESM, though 'intelligent', is designed to be a 'fit and forget' solution, to the point that remote communications are now a standard feature of every installation".

REDUCE COMPRESSOR RUNTIME

Rather than replacing equipment, the Smartcool ESMTM works in conjunction with existing controls in order to ensure that compressors work at maximum efficiency. Importantly, temperature set points remain unaffected, yet by adding the dynamic factor to the control system, compressors are able to run less, thus using less energy. Smartcool describe the principal as "Compressor Optimization" which can reduce compressor runtime by more than 30% and electricity consumption / demand by up to 20%. "With each customer we are able to accurately profile the energy savings possible from any particular site prior in installation," said Weaver. "We also profile the environmental impact of the saving".

TESCO SAVES

Each Tesco Express site utilised several single condensing units for refrigeration of the frozen food displays and chilled cabinets, as well as custom built packs, typical of larger stores. The project, which took two years to complete, required the development of a customised system interface that could easily connect the ESMTM with the many examples of unit found at each site.

Smartcool, whose customer portfolio includes Marks and Spencer, and Somerfield, was able to produce an interface board that made it possible for the ESMTM to interact

with eight differing systems simultaneously at a single location, thus allowing practical installation at each store.

Part of the reason the ESMTM was chosen was that the savings could be easily verified by the customer. In this case initial trials were conducted under a pilot scheme, where systems were installed monitored at different store locations. Energy usage was measured over a four week period, with the ESM isolated on alternate weeks to create an operating comparison. The ESMTM automatically logs hours saved during operation as well as run hours for each compressor or stage. The adoption of the product will mean that 500 selected Tesco Express locations will cut the energy used by refrigeration by an estimated 22%.

SMARTCOOL

Smartcool Systems is a global organisation, offering advanced energy conservation solutions which save energy and money for commercial and retail businesses. The company's UK based distributor, Smartcool Systems UK Limited, plays a key role in global application engineering, as well as sales and distribution activity of the Energy Saving Module (ESM)™ across Europe and the Middle East. The company's Energy Saving Module™ is a product that uses computerised performance analysis and predictive control software to reduce the electricity consumption (kWh) and maximum demand (kW) of air conditioning and refrigeration compressors without penalty.

The facts:

- As well as food retail, Smartcool Systems has successfully installed systems with food producers, cold storage depots, plastic moulding manufactures, breweries, data centres, telecommunication exchanges and aquariums.
- 25000 Energy Saving Modules have been installed world wide.

Energy Saving Module from Smartcool Systems

